

Appl. No. 10/578,620
Amendment dated: November 23, 2009
Reply to OA of: June 23, 2009

REMARKS

Applicants are in receipt of the Official Action dated June 23, 2009 and its contents have been carefully considered. Applicants have amended the claims to more particularly define the invention and in response to the outstanding Official Action and in an effort to place the application in early condition for allowance in view of the indication of allowable subject matter of claim 18 in the outstanding Official Action.

In order to more clearly define the invention from the prior art, Applicants have cancelled all of the claims from the application and added a new claim, claims 26 through 50, as fully supported by the specification as originally filed. Claim 26 corresponds to a combination of claims 1, 3 and 4 and further defines the invention by adding specific limitations to the claims as supported by the original claims and specification. Applicants have included limitations in claims 26 and 27 to clarify that the composite is a form of the metal oxide/hydroxide material which is now the subject of claim 26. Applicants have clarified claim 26 to clarify that the metal oxide/hydroxide is precipitated by treatment of a metal salt with a base in an aqueous medium. None of the prior art references discloses or suggests preparation of precipitated mesoporous metal oxide/hydroxide materials having a mesoporous area greater than $150^2/\text{g}$, or when associated with a substrate, a mesoporous area greater than $800 \text{ m}^2/\text{g}$, where the materials are precipitated by treating a salt with a base in an aqueous medium.

Applicant has also made minor amendments to improve the clarity of the claims. In this regard, Applicant has reduced the number of independent process claims. We have also replaced the expression "co-continuity" with "accessibility". In this regard, an important aspect of the invention is the accessibility of the metal oxide/hydroxide material to the external environment. Support for this amendment can be found in the description at page 4, lines 8 through 21 and 27 to 29. Applicant has also deleted the words "for a time and "from original claims 5, line 3, as it is submitted that the "conditions" will clearly encompass the time of the treatment. Please note that

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Applicants have also included claim 43 to clarify that it is the metal which is oxidized. Applicants most respectfully submit that all of the claims now present in the application are in full compliance with 35 U.S.C. 112 and are clearly patentable over the references of record.

Applicants have carefully considered the rejection of claims 1 to 4, 14 and 25 as being anticipated by US Patent 4,994,429 (Wieserman et al) under 35 U.S.C. 102. This rejection is most respectfully traversed in view of the amendments to the claims. In order to anticipate a claim, all of the elements of the claim must be taught in the reference in the same order as present in the claim. Applicants most respectfully submit that the Official Action appears to have completely ignored the mesoporous area limitations which appear in the claims. Accordingly, it is most respectfully requested that this rejection be withdrawn.

Applicant also most respectfully submit that the anticipation rejection of claims 5 to 10, 13, 14, 17 and 19 to 21 by US Patent No. 5,552,362 (Immel et al) be withdrawn in view of the above comments and further amendments to the claims. The process described in this reference involves washing out the salts prior to the drying and heating phase. This is to be contrasted with the process of the present invention which involves removal of the water from the aqueous medium via evaporation prior to salt removal from the solid residue. There is nothing in this reference that would anticipate or suggest that the resulting product would have the mesoporous area as claimed in the present claims. Accordingly, it is most respectfully requested that this rejection be withdrawn.

The Official Action also cited US Patent No. 3,305,349 (Bovarnick et al) as anticipating claims 5, 11, 17, 20, 21 and 23. The reference also does not teach the production of material having the claimed mesoporous area and does not disclose the claimed process as now amended. Accordingly, it is most respectfully requested that this rejection be withdrawn.

On the basis of the amendments to the claims the erroneous conclusion set forth in the outstanding Official Action as discussed above, which includes a misunderstanding

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-ing of the claimed invention, a misunderstanding of the relationship of the claimed invention, and the misunderstanding of the relationship between the cited references and the claims, the obviousness rejections in relation to claims 11, 12, 15, 16, 22 and 26 should be withdrawn in view of the amendments to the claims and the above comments. There is nothing in the reference which suggests the presently claimed invention and the rejection of claims 11, 112, 15, 16 and 22 as obvious over Immel should be withdrawn as should the rejection of claim 26 over Wiserman et al. Accordingly, it is most respectfully requested that these rejection be withdrawn.

Applicants acknowledge with appreciation the indication that claim 18 would be allowable if re-written in independent form. While this is appreciated, Applicants submit that all of the claims now present in the application are equally allowable and have not yet restricted the application to the subject matter of allowable claim 18; see new claim 42.

In view of the above comments and further amendments to the claims, favorable reconsideration and allowance of all the claims now present in the application are most respectfully requested.

Respectfully submitted,
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A02_2009.04.22.wpd
November 23, 2009